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EXAMINER	
STONE, ROBERT M	

ART UNIT	PAPER NUMBER
2629	

NOTIFICATION DATE	DELIVERY MODE
04/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/553,657	SERBAN, BOGDAN	
	Examiner	Art Unit	
	Robert M. Stone	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 21 January 2009 has been entered and considered by the examiner.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 9, 11-12, 16-17, 19-20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Asher* (US Patent No. 5,159,159) in view of *Eckert* (US Patent No. 3,806,912).

As to **claim 9,** *Asher* (Fig. 2) discloses a position detection device (touch sensor detecting position [abstract]), comprising:

a first substrate (insulation film 20);

a first ohmic resistor (33) applied to said first substrate and extending along an active surface of said position detector (fixed resistor 33 deposited on the substrate), said first ohmic resistor connected between first and second terminals of said position detection device (fixed resistor 33 is connected on opposite ends to terminals 10 and 11 which are connected to the touch sensor [col. 8, lines 10-11 and 35-36];

a plurality of electrical conductors (31) connected to the first ohmic resistor at discrete points thereon and said electrical conductors extending from the first ohmic resistor within the active surface (conductive traces 31 are placed at fixed positions along the fixed resistor 33 and extending out across the touchpad [col. 8, lines 37-39]; and

a plurality of conducting elements (30) arranged, within said active surface (on the same substrate 20 within the touchpad), a first end of said conducting elements being connected to a third terminal of said position detection device (conductive traces 30 are connected at opposing ends to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]); wherein

said conducting elements are configured as an ohmic resistor extending over the active surface of the device (force variable resistor traces 40 are deposited over conductive traces 30 to create ohmic resistors [col. 8, lines 64-66]) and a second end of said conducting elements is connected to a fourth terminal of said position detection device (opposing ends of conductive traces 30 are connected to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]).

Asher does not expressly disclose the conducting elements being located so as to alternate between said electrical conductors.

Eckert (Fig. 1) discloses the conducting elements being located so as to alternate between said first electrical conductors (conducting elements 20

configured as ohmic resistors [col. 2, line 66] are located parallel to conductive traces 14 and 22).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have arranged the traces as taught by *Eckert* in the position detector of *Asher*. The suggestion/motivation would have been to simplify the circuitry [col. 1, lines 59-60] and ease of manufacturing [col. 1, line 20].

As to **claim 16,** *Asher* (Fig. 2) discloses a data input device including a position detection device (touchpad for sensing position data via input from a finger or stylus [abstract]), said position detection device comprising:

a first substrate (insulation film 20);

a first ohmic resistor (33) applied to said first substrate and extending along an active surface of said position detector (fixed resistor 33 deposited on the substrate), said first ohmic resistor connected between first and second terminals of said position detection device (fixed resistor 33 is connected on opposite ends to terminals 10 and 11 which are connected to the touch sensor [col. 8, lines 10-11 and 35-36];

a plurality of electrical conductors (31) connected to the first ohmic resistor at discrete points thereon and said electrical conductors extending from the first ohmic resistor within the active surface (conductive traces 31 are placed at fixed positions along the fixed resistor 33 and extending out across the touchpad [col. 8, lines 37-39]; and

a plurality of conducting elements (30) arranged, within said active surface (on the same substrate 20 within the touchpad), a first end of said conducting elements being connected to a third terminal of said position detection device (opposing ends of conductive traces 30 are connected to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]); wherein

said conducting elements are configured as an ohmic resistor extending over the active surface of the device (force variable resistor traces 40 are deposited over conductive traces 30 to create ohmic resistors [col. 8, lines 64-66]) and a second end of said conducting elements is connected to a fourth terminal of said position detection device (conductive traces 30 are connected at opposing ends to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]).

Asher does not expressly disclose the conducting elements being located so as to alternate between said electrical conductors.

Eckert (Fig. 1) discloses the conducting elements being located so as to alternate between said first electrical conductors (conducting elements 20 configured as ohmic resistors [col. 2, line 66] are located parallel to conductive traces 14 and 22).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have arranged the traces as taught by *Eckert* in the position detector of *Asher*. The suggestion/motivation would have been to

simplify the circuitry [col. 1, lines 59-60] and ease of manufacturing [col. 1, line 20].

As to **claim 17,** *Asher* (Fig. 2) discloses a position detection device (touchpad for sensing touch position [abstract]) having an active surface (substrate 20 of the touchpad on which the touch traces are located) and at least a first and a second terminal (terminals 10-13 connect the touch sensor to the touch pad [col. 8, line 10]), said position detector comprising:

a first substrate (insulation film 20);

a first ohmic resistor (33) applied to said first substrate and extending along said active surface (fixed resistor 33 deposited on the substrate), said first ohmic resistor being connected between said first and second terminals (fixed resistor 33 is connected on opposite ends to terminals 10 and 11 which are connected to the touch sensor [col. 8, lines 10-11 and 35-36];

a plurality of electrical conductors (31) connected to the first ohmic resistor at discrete points thereon and said electrical conductors extending from the first ohmic resistor within the active surface (conductive traces 31 are placed at fixed positions along the fixed resistor 33 and extending out across the touchpad [col. 8, lines 37-39]; and

a plurality of conducting elements (30) arranged, within said active surface (on the same substrate 20 within the touchpad), a first end of said conducting elements being connected to a third terminal of said position detection device

(opposing ends of conductive traces 30 are connected to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]); wherein

said conducting elements are configured as an ohmic resistor extending over the active surface of the device (force variable resistor traces 40 are deposited over conductive traces 30 to create ohmic resistors [col. 8, lines 64-66]) and a second end of said conducting elements is connected to a fourth terminal of said position detection device (conductive traces 30 are connected at opposing ends to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]).

Asher does not expressly disclose the conducting elements being located so as to alternate between said electrical conductors.

Eckert (Fig. 1) discloses the conducting elements being located so as to alternate between said first electrical conductors (conducting elements 20 configured as ohmic resistors [col. 2, line 66] are located parallel to conductive traces 14 and 22).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have arranged the traces as taught by *Eckert* in the position detector of *Asher.* The suggestion/motivation would have been to simplify the circuitry [col. 1, lines 59-60] and ease of manufacturing [col. 1, line 20].

As to **claim 24,** *Asher* discloses a data input device including a position detection device (touchpad for sensing position data via input from a finger or

stylus [abstract]) having an active surface (substrate 20 of the touchpad on which the touch traces are located) and at least a first and second terminal (terminals 10-13 connect the touch sensor to the touch pad [col. 8, line 10]), said position detection device comprising:

a first substrate (insulation film 20);

a first ohmic resistor (33) applied to said first substrate and extending along said active surface (fixed resistor 33 deposited on the substrate), said first ohmic resistor being connected between said first and second terminals (fixed resistor 33 is connected on opposite ends to terminals 10 and 11 which are connected to the touch sensor [col. 8, lines 10-11 and 35-36];

a plurality of electrical conductors (31) connected to the first ohmic resistor at discrete points thereon and said electrical conductors extending from the first ohmic resistor within the active surface (conductive traces 31 are placed at fixed positions along the fixed resistor 33 and extending out across the touchpad [col. 8, lines 37-39]; and

a plurality of conducting elements (30) arranged, within said active surface (on the same substrate 20 within the touchpad), a first end of said conducting elements being connected to a third terminal of said position detection device (conductive traces 30 are connected at opposing ends to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]); wherein

said conducting elements are configured as an ohmic resistor extending over the active surface of the device (force variable resistor traces 40 are

deposited over conductive traces 30 to create ohmic resistors [col. 8, lines 64-66]) and a second end of said conducting elements is connected to a fourth terminal of said position detection device (opposing ends of conductive traces 30 are connected to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]).

Asher does not expressly disclose the conducting elements being located so as to alternate between said electrical conductors.

Eckert (Fig. 1) discloses the conducting elements being located so as to alternate between said first electrical conductors (conducting elements 20 configured as ohmic resistors [col. 2, line 66] are located parallel to conductive traces 14 and 22).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have arranged the traces as taught by *Eckert* in the position detector of *Asher*. The suggestion/motivation would have been to simplify the circuitry [col. 1, lines 59-60] and ease of manufacturing [col. 1, line 20].

As to **claims 11 and 19,** *Eckert* further discloses wherein the first substrate comprises a printed circuit board (material of substrate 13 is that of a printed circuit board [col. 3, lines 11-14]).

As to **claims 12 and 20,** *Asher* discloses wherein said conducting elements are made of a same material as said electrical conductors (conductive

traces 30 and 31 can either be printed inks or thin metallic films [col. 7, lines 61-66]).

4. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Asher* (US Patent No. 5,159,159) in view of *Eckert* (US Patent No. 3,806,912) and *Buchana* (US Patent No. 5,543,589).

Asher in view of *Eckert* does not expressly disclose wherein the first substrate comprises an elastic support sheet.

Buckana discloses wherein the first substrate comprises an elastic support sheet (bottom substrate 10 in Fig. 1E can be replaced with a more flexible substrate such as the same material used flexible membrane touch surface [col. 8, line 66-col. 9, line 2]).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have use a flexible substrate as taught by *Buchana* in the position detector of *Asher* as modified by *Eckert.* The suggestion/motivation would have been to make the entire touchpad flexible to attach to nonplanar surfaces [col. 8, lines 58-65].

5. Claims 13-15 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Asher* (US Patent No. 5,159,159) in view of *Eckert* (US Patent No. 3,806,912) and *Kakuhashi* (US Patent No. 4,517,546).

As to **claims 13 and 21,** *Asher* in view of *Eckert* does not expressly disclose a second substrate and a layer made of resistive or semiconductor material applied to said second substrate, said second substrate being arranged

on top of the first substrate such that said layer of resistive or semiconductor material faces said electrical conductors and conducting elements within the active surface.

Kakuhashi (Fig. 6) discloses a second substrate (flexible insulating layer 4B) and a layer made of resistive or semiconductor material applied to said second substrate (main resistive layer 3B superposed to the bottom of insulating layer 4B [col. 5, lines 15-18]), said second substrate being arranged on top of the first substrate (resistive layer 13 is put on top of electrode layer 6x and the bottom resistive layer 11 [col. 5, lines 15-18]) such that said layer of resistive or semiconductor material faces said electrical conductors and conducting elements within the active surface (resistive layer 3B is between electrode layer 6x and protective insulating layer 4B).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to have provided the resistive layer as taught by *Kakuhashi* in the position detector of *Asher* as modified by *Eckert*. The suggestion/motivation would have been as a protective layer to resist wear [col. 4, lines 12-13].

As to **claims 14 and 22**, *Kakuhashi* further discloses wherein said second substrate comprises an elastic support sheet (flexible protective insulating layer 4B [col. 5, lines 16-19] [col. 3, lines 40-43]; also attached to elastic pressure sensitive conductor sheet 12).

As to **claims 15 and 23**, *Kakuhashi* further discloses a pressure-distributing layer applied to said second substrate (when pressed, insulating layer 14 will distribute pressure over the whole touch pad in a manner proportional to it's rigidity. The harder the layer, the more evenly the pressure will be distributed over the touchpad. If the layer is very flexible, the pressure will only be distributed throughout a small area around the point of contact [col. 3, lines 36-46]; elastic pressure sensitive conductive sheet 12 is located below the top substrate to be used for pressure measurements [col. 5, line 15]).

Response to Arguments

6. Applicant's arguments filed 21 January 2009 have been fully considered but they are not persuasive.

a. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant submitted that *Asher* does not teach "a plurality of conducting elements arranged, within said active surface, so as to alternate between said electrical conductors". The Examiner has not cited *Asher* as teaching "so as to alternate between said electrical conductors". Instead, in the previous Office Action the Examiner has cited *Eckert* as teaching this limitation. [*Eckert* (Fig. 1) discloses the conducting elements being located so as

to alternate between said first electrical conductors (conducting elements 20 configured as ohmic resistors [col. 2, line 66] are located parallel to conductive traces 14 and 22)]. Therefore, this limitation being taught by *Eckert* as combined with *Asher's* teachings of the other claim limitations including "a plurality of conducting elements arranged, within said active surface" [a plurality of conducting elements (30) arranged, within said active surface (all traces are on the same substrate 20 within the touchpad as shown in Fig. 2)] stands rejected as indicated in the previous Office Action.

b. Applicant further submits that *Asher* does not teach the limitation "configured as an ohmic resistor extending over the active surface of the device". Examiner respectfully disagrees. *Asher* (Fig. 2) teaches that conducting elements (30) are configured as an ohmic resistor (by laying force variable resistor traces 40 over top of conductive elements 30, an ohmic resistance is created helping to prevent crosstalk between adjacent conductive traces providing higher accuracy as well as preventing deterioration of the traces and decreasing noise [col. 8, line 8-col. 9, line 14]) extending along the active surface of the device (force variable resistor traces 40 and conductive traces 30 extend along substrate 20 [col. 8, lines 64-66]).

c. Applicant further submits that *Asher* does not teach the limitation "a first end of said conducting elements is connected to a third terminal of said position detection device" and "a second end of said conducting elements is connected to a fourth terminal of said position detection device". Examiner respectfully

disagrees. *Asher* teaches a first end of said conducting elements (the end of the conducting elements 30 that is closest to resistive strip 32 as shown in Fig. 2) being connected to a third terminal of said position detection device and a second end of said conducting elements (the end of conducting elements 30 that is furthest from resistive strip 32 as shown in Fig. 2) is connected to a fourth terminal of said position detection device (the conducting elements 30 have both ends connected to resistive strip 32 which is itself connected to terminals 12 and 13 of the touch sensor [col. 8, lines 10-11 and 39-41]. Therefore, the end of conducting elements 30 closest to resistive strip 32 is connected to a third terminal 12 of the touch sensor and the end of the conducting elements 30 further from the resistive strip 32 is connected through the conducting element itself and the resistive strip 32 to a fourth terminal 13 of the touch sensor).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Stone whose telephone number is (571)270-5310. The examiner can normally be reached on Monday-Friday 9 A.M. - 4:30 P.M. E.S.T. (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh D. Nguyen can be reached on (571)272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert M Stone/
Examiner, Art Unit 2629

/CHANH NGUYEN/
Supervisory Patent Examiner, Art Unit 2629